



NEWS

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NNSA Recovers Unique Radiological Devices

Secures material useful for "dirty bombs"

WASHINGTON, D.C. -- A two-month effort by the National Nuclear Security Administration (NNSA) and Los Alamos National Laboratory has recovered 13 large radioactive sealed sources from several locations around the nation. The devices contain material that could be used for a radiological dispersion device, also known as a "dirty bomb," and are part of more than 11,000 radiation sources recovered domestically by NNSA.

NNSA's Global Threat Reduction Initiative (GTRI) program recovered the 13 heavily shielded devices known as gammators, which contain 4-inch long stainless steel-clad cylinders of cesium-137, a highly radioactive isotope often used in medical and industrial radiology. The operations took place in August and September following state regulations.

"These recoveries are part of a nationwide effort to reduce risks associated with accessible and unwanted radioactive material," said NNSA Administrator Linton F. Brooks. "NNSA and Los Alamos National Laboratory are aggressively removing radioactive materials that could be useful to attempting to make a dirty bomb. This administration puts a premium on making sure dangerous materials don't fall into the hands of terrorists both domestically and overseas."

The radiological source recoveries included three sites in Pennsylvania, two in New Jersey, and one each in New Hampshire, North Carolina, Alabama, Michigan, Illinois, Wisconsin, Utah and Oregon. The gammators were removed from one hospital, one high school, six universities and five small colleges, and are now in safe and secure storage.

Because of heavy shielding, the unique devices posed little risk of radiation exposure; however, heightened homeland security efforts by the Bush administration have led to increased security requirements at both the state and federal level, making a priority of removing these sources to safe and secure locations. Gammators, which weigh on average about 1,850 pounds, were supplied to schools across the United States and to other countries in the 1960s and 1970s through the U.S. government's "Atoms For Peace" program.

Students used the gammators in experiments to test the effects of radiation exposure on materials and plants, while hospitals use similar devices to irradiate blood. Each device originally contained 400 Curies of cesium-137, but the substance's half-life has reduced its radioactivity to half of what it once was over the past 30 years.

While many of these devices had been idle for decades, economic barriers, such as high disposal and transportation costs, kept owners of the units from appropriately disposing of them. Current increased security awareness has forced many of them to re-evaluate the risk of having the units, and seek assistance in disposing of them.

The recovery and transportation of the devices was accomplished by using a special contractor with U.S. Department of Transportation (DOT) 20WC specification containers. These robust, Type B shipping containers were used to overpack the 30-year-old devices to ensure the highest levels of transportation safety as required by the DOT.

The U.S. Radiological Threat Reduction Program, which falls under NNSA’s GTRI umbrella, secures and removes materials that pose not only a safety hazard but also a security risk. It is managed by Los Alamos National Laboratory’s Nuclear Nonproliferation Division, which calls the effort the Off-Site Source Recovery Project (OSRP), and supports NNSA in recovery and disposition of excess, unwanted, and/or abandoned radioactive sealed sources and other radioactive material. Sources containing radioactive plutonium, americium, cesium, cobalt and strontium have been recovered from medical, agricultural, research and industrial locations throughout the nation.

“This is the culmination of a significant effort by NNSA, OSRP, state and federal regulators and the sealed source industry,” said Andy Tompkins, a member of the OSRP team at Los Alamos. “To finally see all known excess gammators in the U.S. private sector secure and safe achieves one of our primary mission goals and helps enhance our national security.”

The mission of the GTRI is to identify, secure, recover and/or facilitate the final disposition of high-risk vulnerable nuclear and radiological materials around the world as quickly as possible.

NNSA enhances U.S. national security through the military application of nuclear energy, maintains the U.S. nuclear weapons stockpile, promotes international nuclear nonproliferation and safety, reduces global danger from weapons of mass destruction, provides the U.S. Navy with safe and effective nuclear propulsion, and oversees its national laboratories to maintain U.S. leadership in science technology.

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